

WATERTOWN SERVICE AREA REPORT

PREPARED FOR

SIOUX RURAL WATER SYSTEM

February 2016

Schneever
Stephanie L. Moen
Ex. No. 4
Date: _____

DGR Project No. 802810

EXHIBIT

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	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of South Dakota.</p> <p>By <u><i>Darin Schriever</i></u> <u>2/5/16</u> Darin L. Schriever, P.E.</p> <p>License Number <u>7785</u></p> <p>My license renewal date is <u>July 31, 2016</u>.</p> <p>Pages or sheets covered by this seal: <u>All except Appendices</u></p>
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DGR Project No. 802810

DGR Engineering

Rock Rapids, IA (712) 472-2531	•	Sioux Falls, SD (605) 339-4157	•	Sioux City, IA (712) 266-1554	•	Ankeny, IA (515) 963-3488
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Memo

TO: DLS
FROM: Paul Messner
DATE: 1/25/2016
RE: Sioux-Watertown Users

Model used: 15bndry0.p2k, 15bndry1.p2k, 15bndry0-exst.p2k

We analyzed Sioux's ability to provide service to the following users.

West Side of Watertown

- Pelican View Estates (154 connections)
- Kaks Addition (22 connections)
- B&G Welding
- C&K Truck & Trailer Repair
- K&P Pump Repair/ Controls

East Side of Watertown

- Big Shot Fireworks
- Cross Country Freight Solutions
- Dakota Automaition
- Fed Ex
- Hartley Trucking
- Kenworth
- Lews Fireworks
- McFleeg Feed
- New Building
- Rising Star Hydrolics
- Watertown Auction Inc.
- Wheel Co
- WW Tire

West Side of Watertown

We first analyzed the system's minimum pressures and maximum flows during instantaneous peak demand (IPD).

Sheet 1 shows the overall pressures and flows of the existing system on the west side of Watertown before the improvement project is completed.

Sheet 2 is the same as the previous sheet but shows a close up of the area.

Sheet 3 shows a close up of the WTP.

Sheet 4 shows the overall pressures and flows of the existing system on the west side of Watertown after the improvement project is completed.

Sheet 5 is the same as the previous sheet but shows a close up of the area.

Sheet 6 shows a close up of the WTP.

Sheet 7 shows the overall pressures and flows with the users added with minor improvements after the improvement project is completed.

Sheet 8 is the same as the previous sheet but shows a close up of the area.

Sheet 9 shows a close up of the WTP.

East Side of Watertown

Sheet 10 shows the overall pressures and flows of the existing system on the east side of Watertown before the improvement project is completed.

Sheet 11 is the same as the previous sheet but shows a close up of the area.

Sheet 12 shows the overall pressures and flows with the users added before the improvement project is completed.

Sheet 13 is the same as the previous sheet but shows a close up of the area.

Sheet 14 shows the overall pressures and flows of the existing system on the east side of Watertown after the improvement project is completed.

Sheet 15 is the same as the previous sheet but shows a close up of the area.

Sheet 16 shows the overall pressures and flows with the users added after the improvement project is completed.

Sheet 17 is the same as the previous sheet but shows a close up of the area.

We also reviewed the average pressures and flows during a 20 hour delivery. The following sheet better show the average predicted pressures in the distribution system.

West Side of Watertown

Sheet 18 shows the overall average pressures and flows of the existing system on the west side of Watertown before the improvement project is completed.

Sheet 19 is the same as the previous sheet but shows a close up of the area.

Sheet 20 shows a close up of the WTP.

Sheet 21 shows the overall average pressures and flows of the existing system on the west side of Watertown after the improvement project is completed.

Sheet 22 is the same as the previous sheet but shows a close up of the area.

Sheet 23 shows a close up of the WTP.

Sheet 24 shows the overall average pressures and flows with the users added with minor improvements after the improvement project is completed.

Sheet 25 is the same as the previous sheet but shows a close up of the area.

Sheet 26 shows a close up of the WTP.

East Side of Watertown

Sheet 27 shows the overall average pressures and flows of the existing system on the east side of Watertown before the improvement project is completed.

Sheet 28 is the same as the previous sheet but shows a close up of the area.

Sheet 29 shows the overall average pressures and flows with the users added before the improvement project is completed.

Sheet 30 is the same as the previous sheet but shows a close up of the area.

Sheet 31 shows the overall average pressures and flows of the existing system on the east side of Watertown after the improvement project is completed.

Sheet 32 is the same as the previous sheet but shows a close up of the area.

Sheet 33 shows the overall average pressures and flows with the users added after the improvement project is completed.

Sheet 34 is the same as the previous sheet but shows a close up of the area.

See the following sheets for details.

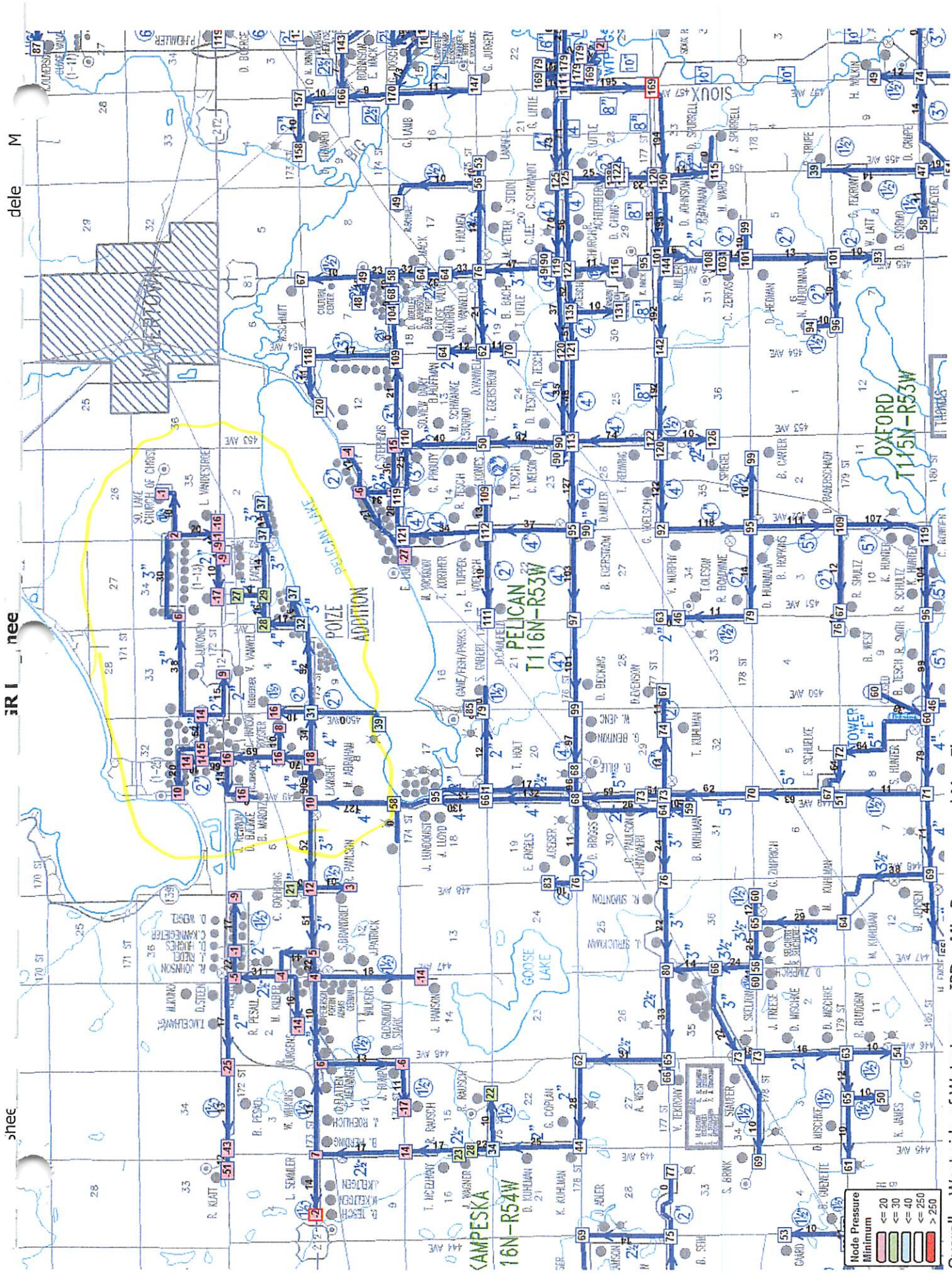
Please contact us with any questions.

Sincerely,

DGR ENGINEERING

Paul Messner

Paul Messner
Enclosure



Overall - West side of Watertown - IPD - Min Pressures and Max Flows
Existing System before the Improvement Project is complete



Overall – East side of Watertown – IPD – Min Pressures and Max Flows
Existing System before the Improvement Project is complete